Geometry Online! Name _____

PRACTICE – Right Triangles – Trigonometry – G.8.3 Date _____Period _____

Find the value of each ratio to the nearest ten thousandth.
ex. sin 35° = .5736

1. sin 40° = _____ 2. cos 36° = _____ 3. tan 15° = _____

4. sin 82° = _____ 5. cos 78° = _____ 6. tan 63° = _____

Find the measure of each angle to the nearest degree.
ex. sin A = .7586 49°

7. sin A = .8365 _____ 8. cos B = .3494 _____ 9. tan C = .8383 _____

10. sin D = .1334 _____ 11. cos E = .0634 _____ 12. tan F = 4.4533 _____

Find the trigonometric ratio as a fraction and as a decimal rounded to the nearest ten thousandth.

fraction decimal

13. sin A = [ ] [ ]

fraction decimal

14. cos F = [ ] [ ]

fraction decimal

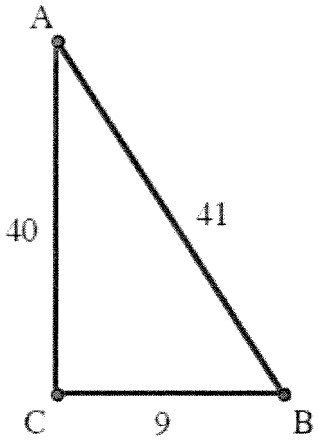
15. tan B = [ ] [ ]

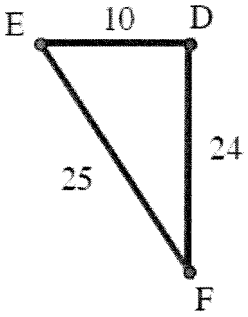
fraction decimal

16. sin E = [ ] [ ]

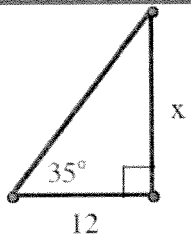
fraction decimal

17. cos A = [ ] [ ]





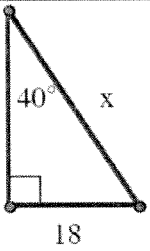
18.



equation

x = _____

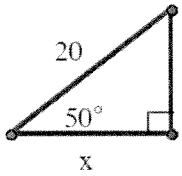
19.



equation

x = _____

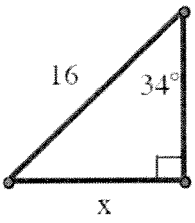
20.



equation

x = _____

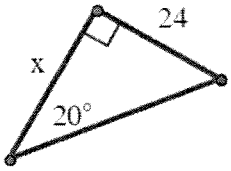
21.



equation

x = _____

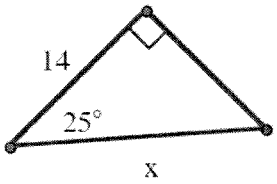
22.



equation

x = _____

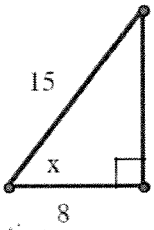
23.



equation

x = _____

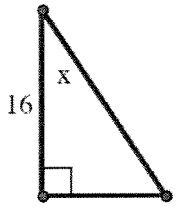
24.



equation

x = _____

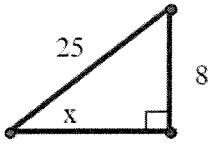
25.



equation

x = _____

26.

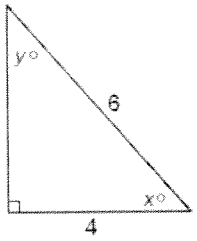


equation

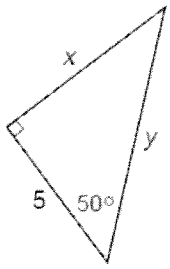
x = _____

Find the values of x and y. Round to the nearest tenth.

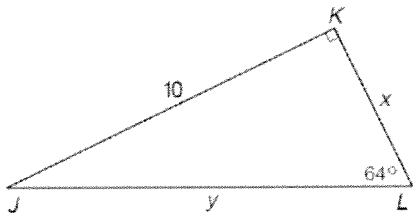
27.



28.



28.



Solve each problem. Round measures of segments to the nearest hundredth and measures of angles to the nearest degree.

29. A tree 50 feet high casts a shadow 66 feet long. Find the measure of the angle of elevation of the sun.

(I) sketch **(II) equation** **(III) answer** _____

30. A balloon on a 30 foot string makes an angle of 50° with the ground. How high above the ground is the balloon if the person holding the balloon is 6 feet tall?

(I) sketch **(II) equation** **(III) answer** _____

31. A 30 foot ladder leans against a building making an angle with the ground of 42°. What is the height the ladder reaches up the building?

(I) sketch **(II) equation** **(III) answer _____**

32. A boat in the water is 300 feet from the base of a lighthouse. The distance from the boat to the lighthouse is 700 feet. Find the angle of elevation from the boat to the top of the lighthouse.

(I) sketch **(II) equation** **(III) answer _____**

33. An airplane, 50 meters above ground, is attempting to land. The planes angle of depression is 80°. Find the ground length the plane is from landing.

(I) sketch **(II) equation** **(III) answer _____**